



Attention: Richard Dwyer, Manager of Licensing

RE: 3BM-COR1521 –Municipality of Coral Harbour – Renewal and Amendment Application

Dear Richard,

The Government of Nunavut Department of Community and Government Services (CGS) on behalf of the Municipality of Coral Harbour has prepared a response to the comments submitted by Environment and Climate Change Canada (ECCC) and Crown Indigenous Relations and Affairs Canada (CIRNAC) on the water license renewal and amendment application.

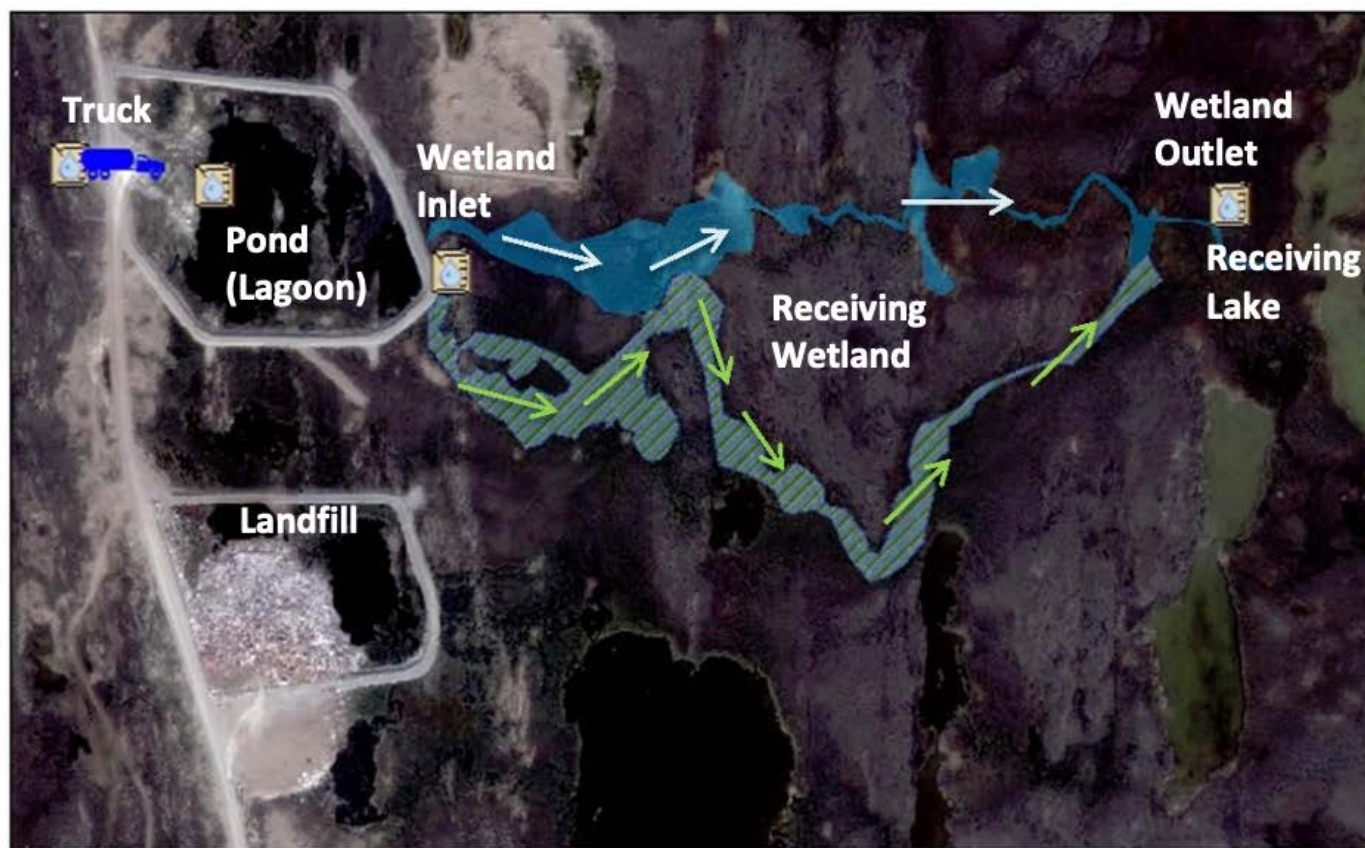
Regards,







Elan Chalmers
Municipal Planning Officer
Government of Nunavut
Community and Government Services
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Agency	Comment	Recommendation	Licensee Response
ECCC	01	<p>ECCC recommends the Licensee provide the most recent sludge monitoring results and estimates when sludge removal may be required, based on sludge measurements to date.</p> <p>ECCC recommends that the Sewage Disposal Facilities (SDF) O&M Plan be updated to provide additional details regarding sludge management (such as sludge monitoring, removal, characterization, treatment and disposal), and to include sludge disposal criteria and management methods for any sludge that does not meet criteria.</p> <p>ECCC recommends the sewage lagoon performance and effluent quality monitoring results and trends be used to inform sludge management decisions.</p>	The sludge level is observed through visual inspection during the annual inspection and has not been identified as a compliance issue in the reports. The lagoon in Coral Harbour is highly permeable so an accumulation of sludge that would lead to a hinderance in the wetland's ability to treat effluent can be monitored through sampling results.
ECCC	02	ECCC recommends measuring and recording the ambient conditions (including precipitation, wind speed and direction, air temperature, and pH and temperature of receiving waterbody) and any other notable conditions (such as algal growth) at the time of SNP sampling, and using this information to support the interpretation of monitoring data. Field measurements should be set out in the monitoring plan(s) and results provided in annual water licence reports.	The QA/QC Plan will be updated to reflect this recommendation.
ECCC	03	<p>ECCC recommends the QA/QC Plan be updated to:</p> <ul style="list-style-type: none"> (1) Define field blanks and travel blanks, in consultation with the analytical laboratory; (2) Incorporate at least one travel blank per sampling event; (3) Ensure the QA/QC samples represent at least 10% of the total samples collected. 	The QA/QC Plan will be updated to reflect this recommendation.

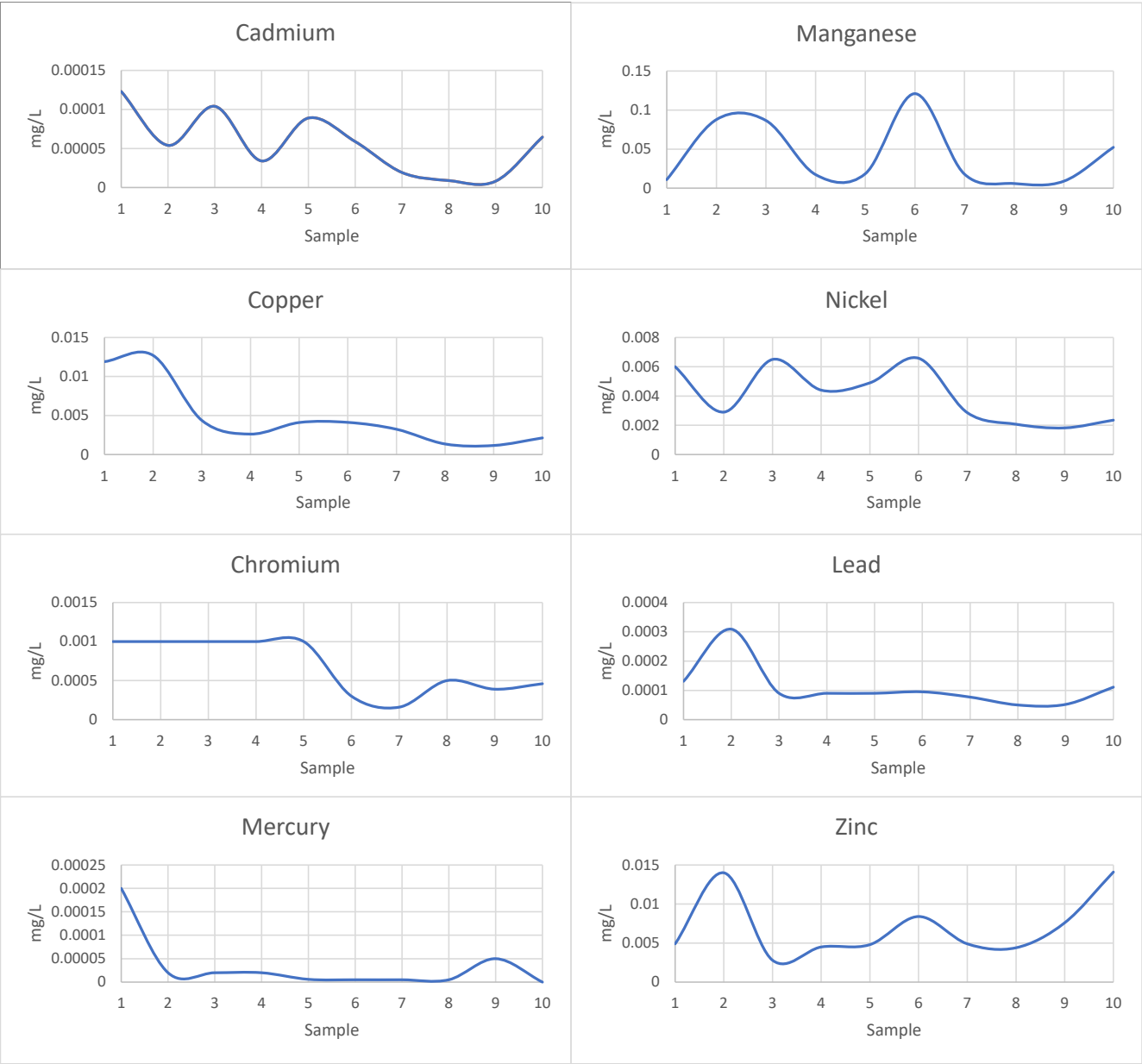
ECCC	04	ECCC recommends the Solid Waste Disposal Facilities (SWDF) drainage and Sewage Disposal Facilities (SDF) effluent be kept separate, to the extent possible, and requests the Applicant clarifies whether SWDF drainage (runoff, leachate) is able to enter the wetland treatment area. The SWDF O&M Plan should include measures to prevent the movement of SWDF runoff and leachate into the wetland treatment area.	The east berm is located at a lower elevation from the wetland channelized pathway followed by the wastewater effluent (Figure 2 in Sewage Disposal Facility OM Plan, attached below). Samples from the outlet of the wetland treatment area COR-5 are tested for metals as per the current license and the results are included in the annual reports submitted to NWB each year. If mixing is occurring upstream of COR-5 in the wetland, samples may show metal accumulation over time. The sample results from 2015-2020 are provided below along with graphs that demonstrate that there does not appear to be an increase of metals over time.
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Legend

-  Wastewater truck
-  Water quality sample
-  Spring flow area and direction
-  Summer and fall flow area and direction

Year	Month	Sample	Cadmium	Copper	Chromium	Mercury	Manganese	Nickel	Lead	Zinc
2015	August	1	0.000123	0.0119	0.001	0.0002	0.0109	0.006	0.000131	0.0049
2016	June	2	0.000054	0.0127	0.001	0.00002	0.0878	0.0029	0.000309	0.014
2016	August	3	0.000104	0.00438	0.001	0.00002	0.0866	0.0065	0.00009	0.0028
2016	September	4	0.000034	0.00262	0.001	0.00002	0.0173	0.0044	0.00009	0.0045
2017	June	5	0.000089	0.0041	0.001	0.0000059	0.0184	0.0049	0.00009	0.0048
2017	July	6	0.0000588	0.00412	0.0003	0.000005	0.121	0.00658	0.000095	0.0084
2018	July	7	0.0000192	0.00324	0.00016	0.000005	0.0179	0.00286	0.000077	0.0049
2018	July	8	0.0000089	0.00135	0.0005	0.000005	0.0059	0.00207	0.00005	0.0044
2019	July	9	0.0000081	0.00116	0.00039	0.00005	0.00888	0.00182	0.000052	0.0076
2020	July	10	0.0000646	0.00213	0.00046	<0.000005	0.0523	0.00235	0.000111	0.0141



ECCC	05	ECCC recommends the Licensee consult the following documents to support responsible solid waste management: Technical Document for Batch Waste Incineration (Environment Canada, January 2010) https://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1#:~:text=Environment%20Canada%20has%20developed%20a,of%20the%20Canada-wide%20Standards Environmental Guideline for the Burning and Incineration of Solid Waste (Government of Nunavut – Department of Environment, 2012) https://www.gov.nu.ca/environment/documents/guideline-burning-and-incineration-solid-waste-2012	Noted. The <i>Environmental Guideline for the Burning and Incineration of Solid Waste</i> (Government of Nunavut – Department of Environment, 2012) is referenced in the current SWDF O&M Plan.
ECCC	06	ECCC recommends the Licensee evaluate the remaining disposal capacity available at the SWDF. Estimate whether sufficient disposal capacity is available for the duration of the licence term and discuss plans to manage any capacity issues.	The landfill is a legacy site that has been in operation since before the earliest available records from the 1980s. The site still has available space based on visual inspection and is not currently at risk of reaching capacity because the municipality practices open burning of non-hazardous domestic waste following the <i>Environmental Guideline for the Burning and Incineration of Solid Waste</i> (Government of Nunavut – Department of Environment, 2012).
ECCC	07	ECCC recommends the Licensee consults ECCC's planning and technical guidance document "Solid Waste Management for Northern and Remote Communities" to support responsible solid waste management. A summary and a link to the full document are available on Environment and Climate Change Canada's website at: http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=97182135-1	Noted.
CIRNAC	01	(R-01) Subject to the approval of the Board, CIRNAC recommends that in the interim, until a meter can be installed, that reporting the average monthly withdrawal is acceptable.	Previously water consumption had been reported based on monthly water delivery billing records. Under the new license the water withdrawn from Post River to fill the raw water reservoir will be reported. A flowmeter is installed on this pump.
CIRNAC	02	(R-02) CIRNAC recommends that the licensee should: a) Clarify how they are producing monthly estimates; b) Update their solid waste disposal, operation and maintenance plan, and QA/QC plan to incorporate	a) Monthly estimates of sewage are based on billing records of delivered potable water. For all communities in Nunavut with trucked water and sewer services, delivered water is assumed to be equal to wastewater generation. This, along with projection formulas developed by the Government of Northwest Territories are used to estimate necessary capacity for capital wastewater projects.

		daily discharge monitoring methods which are actionable.	<p>For solid waste, generation can be estimated from per capita waste generation rates established from 2019 waste audits in neighboring municipalities or from an estimate of truck loads delivered in a typical week.</p> <p>b) OM plans will be updated with:</p> <ul style="list-style-type: none"> • a description of how daily sewage discharge can be estimated from monthly water delivery records or from the GNWT formulas. • a description of how daily solid waste discharge can be estimated from per capita generation rates established from recent waste audits in nearby communities or from an estimate of average weekly truck delivery accounting for the collection truck's size. <p>Currently there are no daily discharge monitoring methods that are practical beyond estimates for most Nunavut municipalities. This is a community of 891 (Statistics Canada, 2016) with a single foreman managing all municipal operations.</p>
CIRNAC	03	(R-03) CIRNAC has no concerns on the requirement of paper copy and defer to the NWB's judgement.	N/A
CIRNAC	04	(R-04) CIRNAC recommends that the NWB consider the combining of the two plans into one submission.	N/A
CIRNAC	05	(R-05) CIRNAC recommends that the NWB should keep the licence condition requiring inspection of engineered facilities by a professional Engineer.	<p>The licensee is not requesting that CIRNAC inspect the facilities in an engineering capacity. A licensee representative will accompany the CIRNAC inspector during the annual inspections, typically a Technical Officer or the Kivalliq Municipal Engineer, who will conduct a concurrent inspection. However, this cannot always be an engineer since they may not be able to travel to Coral Harbour in July or August due to capacity issues. In these instances, engineers rely on Technical Officers for these inspections whose reports, along with all other reports, are reviewed by an engineer. The engineer then provides recommendations based on the available information.</p> <p>For the sake of streamlining information the licensee is requesting that all engineering reports be submitted with the annual report by March of the following year rather than 60 days from the time of an inspection.</p>
CIRNAC	06	(R-06) CIRNAC recommends that the NWB consider this request to modify this licence condition.	N/A

CIRNAC	07	Recognizing concerns with Covid-19, CIRNAC defers to the NWB's judgement to decide the type of technical meeting (TM) / pre-hearing conference (PHC) for the Hamlet of Coral Harbour's Type "A" Water Licence application.	The CGS Community Support Division is extremely short staffed at this time, in addition to recognizing concerns related to travel during the COVID-19 pandemic. Allowing written responses will allow our team to support the licensee most efficiently.
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